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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,329	06/08/2000	JEAN MORAND	39417/DBP	6928

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1733

6

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Applicati n N .		Applicant(s)	
	09/581,329		MORAND ET AL.	
	Examin r		Art Unit	
	Geoffrey L. Knable		1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |                                                                                                            |                                                                             |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> | 6) <input type="checkbox"/> Other: ____                                     |

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1. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification and claims (e.g. claim 6) define the manner of fixing the loops to the support as "a technique of the overcasting or tacking kind" – it however is not clear that the ordinary artisan would understand what these techniques are and therefore it is submitted that it does not appear that the ordinary artisan has been presented with sufficient information to practice the claimed invention without an undue burden of experimentation, it being stressed that the manner of fixing the loops to the support would seem to be a critical feature of the invention as it is apparently what allows the "loose" fixing.

2. Claims 1-9, 13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 1-2, the use of the phrase "of the type" raises some potential ambiguity in determining whether or not the following steps are actually positive requirements of the claim. It would be clearer if this phrase were deleted.

In claim 1, line 3, no antecedent has been established for "the carcass".

In claim 1, lines 4-5, the intended step is indefinite and confusing as it is not clear what this "holding" represents in typical tire building and further as presently phased, it is not clear if this step includes a step of "winding" the preform on the support – if it

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does, it would be clearer if this were more explicitly and actively defined. Further, the phrase “support of circular general shape” is somewhat confusing – it is assumed that this is intended to define the support as generally cylindrical but the language used would not normally accurately define a cylinder (other than in cross-section). Note analogous language at claim 1, lines 19-20.

In claim 1, lines 6-7, the scope of protection afforded by the language “continuing the manufacture of the tire, in a manner known per se...” is indefinite and confusing as the metes and bounds of this continued manufacture cannot be readily ascertained.

In claim 1, lines 7-10, it is not entirely clear what is meant by “fastening of the free ends of the preform” and how this fits into known tire building. While it is indeed well known and conventional to build a tire by winding an innerliner and carcass ply on a cylindrical tire building drum followed by toroidal shaping, the carcass and liner located between the beads certainly being stretched during this toroidal shaping, the free ends of the carcass ply are not typically fastened prior to this shaping (although it is noted that areas of the carcass/liner located adjacent to the free ends, i.e. at the beads, are often clamped to or pushed against the beads prior to the toroidal shaping step but in such case, the clamped areas/beads are typically brought axially inward with radially outward expansion of the carcass – they thus not “fastened” prior to shaping). Insofar as applicant is apparently not asserting any novelty for this particular step alone, clarification is therefore required of what this “fastening” step comprises and how it fits into the known tire building process.

In claim 1, lines 8-9, it is suggested that the underlining be removed.

In claim 1, lines 15 and 19, the antecedent for “said preform” and “the aforementioned preform” is potentially indefinite as two different preforms have been defined in the claim. It is suggested that these different preforms be more distinctly defined to avoid confusion.

In claim 1, line 16, it is not considered that the scope of protection afforded by defining that the conductor is fixed “in a loose manner” can be adequately and readily ascertained.

In claim 1, lines 18-20, as noted above with respect to step (ii), it is not entirely clear what this “holding” step represents. Also, it is noted that reference is made to “holding” the preform on the support without any step of actually applying or winding this on the support – it would be clearer if this apparently necessary step were more explicitly defined.

As already noted, it is not clear what a “technique of the overcasting or tacking kind” (claim 6) represents.

In claim 13, line 4, the phrase “*especially* electrical energy” renders the claim indefinite.

In claim 13, lines 4-5, it is not clear whether this claim requires the presence of an implanted active element.

In claim 15, line 3, it is not clear whether the reference to “EEPROM” is intended to form a limitation on the claimed invention insofar as it is placed within parentheses. If it is intended to form part of the claimed invention, the parentheses should not be used.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollack et al. (US 5,181,975).

Pollack et al. discloses building a tire with a preformed conductor fixed therein, this conductor having what can be termed a "rectangular general shape" (e.g. note fig. 4). Further, this reference clearly indicates that the conductor is incorporated in the tire on the drum prior to toroidal shaping – note esp. col. 10, lines 6-18. As already noted, it

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is not clear what is included by requiring that the conductor be "fixed in a loose manner" – it is however submitted that since some relative conductor movement is contemplated (note esp. col. 10, lines 14-15), it is not unreasonable to consider this to meet the present claims. Although this reference does not explicitly indicate that the initial building drum is generally cylindrical, it is clear from the above noted passages that the tire preform is built on a drum prior to toroidal shaping and as is well known and conventional in this art, the drum in such building processes is normally and conventionally generally cylindrical in shape and thus to provide such would have been obvious to the ordinary artisan. As already noted, it is not clear what is meant by the claimed "holding" steps – it is not however seen at present that they define anything beyond simply mainlining the ply located on the drum as is conventional. Although the conductor in this reference is located adjacent the beads and thus is not located under the tread, nothing in the present claims defines over a location in the beads.

As to claim 2, a conductor location between the liner and carcass is clearly taught – note esp. col. 11, lines 52+.

7. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by DE 2524463 to Breuer.

DE '463 discloses a tire having an implanted conductor under the tread that further would seem to be in "rectangular general shape" when flat and oriented in the claimed manner in light of figs. 2a and 2b.

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann (US 5,479,171).



Schuermann discloses building a tire with an antenna formed from a conductor shaped in rectangular form (fig. 1). Further, the reference indicates that the antenna can be incorporated within the structure of the tire (e.g. sidewall) in an "integrated manufacturing process" (col. 3, lines 48-52). Although this reference does not provide any more specifics of the manufacturing process, it is well known, conventional and common in this art to build up the various tire plies on a cylindrical drum followed by expansion to toroidal form as claimed. To incorporate the rectangular conductor during this initial building on the cylindrical form would therefore have been an obvious manner to build the desired tire. Further, to aid in building efficiency as well as to help maintain the desired shape of the antenna, to preincorporate the rectangular conductor forming the antenna within an elastomeric substrate would have been obvious, it further being noted that it is extremely common and well known in this art to preincorporate almost every reinforcement material with elastomer prior to the building steps for similar reasons. Further, as is well known, the embedded reinforcement materials in tires commonly do reorient within the tire (e.g. "pantograph") during tire building/shaping (prior to curing) and thus it would seem reasonable to term such as "loose" fixing – following such conventional embedding techniques would thus likewise be expected to result in "loose" fixing of the conductor.

As to claim 2, insofar as locations both on and adjacent the tire interior are clearly contemplated (e.g. figs. 4a, 4b), any location in this area including between the carcass and liner plies would have been obvious. As to claim 3, note fig. 1. As to claim 4, it would seem from fig. 3 that the antenna extends entirely around the tire



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circumference and thus to form this structure, the two short sides would be formed to be adjacent as claimed.

9. Claims 5-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann (US 5,479,171) taken in view of WO 90/12474 to Malmer et al.

As to claim 5-9, a sensor, etc. is taught by Schuermann and further it would seem from pg. 10, lines 16+ of WO '474 that the provision of additional loops would have been obvious depending upon the environment of use and desired reading distance.

As to claim 10 directed to the tire, Schuermann only seems to depict the antenna located in the sidewall of the tire. WO '474 is directed to similar sensor systems and in particular indicates that the conductor or antenna can suitably be provide in a number of locations in the tire, including in the tread area (note esp. fig. 4). to provide the rectangular antenna of Schuermann in the tread area would therefore have been obvious in light of this teaching. The remaining features of dependent claims 11-15 are considered to have been taught or certainly obvious in light of the cited references, it being clear that these references suggest a sensor system that is read and powered by coupling to an external source.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

WO 99/29523 to Goodyear discloses a tire with an embedded antenna but is not available as prior art.


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Sumi (US 4,006,449) shows a rectangular coil for a wheel but this is mounted to the rim rather than to or within a tire.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 703-308-2062. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
February 9, 2002